

**PRIMARY/RESTORATION PATH CALCULATION IN MESH NETWORKS  
BASED ON MULTIPLE-COST CRITERIA**

**ABSTRACT OF THE DISCLOSURE**

A method for determining primary and restoration paths for a new service in a mesh network involves (1) for each of a plurality of candidate primary/restoration path pairs for the new service, generating a path cost for each candidate pair, where the path cost for each restoration path is a function of the sum of the cost of links within the restoration path, and (2) selecting the primary and restoration paths for the new service from the plurality of candidate path pairs based on the path cost. If no sharing is possible, for low utilization links, the cost of links is a function of the administrative weight of the link, whereas for high utilization links, the link cost is a function of the inverse of the available capacity on the link. If sharing is possible, the cost is a function of the inverse of a sharing degree for the link.